Social Constructivism and Beyond. On the Double Bind between Politics and Science

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Abstract:

Moving beyond the post-political framing of the climate change debate, scholars have tried to show that scientific practice is based on politically significant forms of social construction. While sympathizing with this attempt, this paper questions their use of the term 'political'. Drawing on post-foundational political theory (Mouffe, Lefort) and focusing on the example of climate denialism, it argues that the relation between science and the political constitutes a double bind: while upholding an original distinction between science and the political is untenable, *representing* science in political terms is impossible, because of the specific way the scientific field is symbolically instituted.

Introduction

Over the course of the last decade, a significant body of scholarly literature has shown how many mainstream environmental discourses, and in particular discourses concerning climate change, are depoliticized, as they exhibit a consensual or techno-scientific logic which tends to make key political dimensions of the climate crisis invisible (Bettini, 2013; Brand, Bullard, Lander, & Mueller, 2009; Goeminne, 2010, 2012; Kenis & Lievens, 2014, 2015, 2017; Macgregor, 2014; Machin, 2013; Maeseele, 2015; Oosterlynck & Swyngedouw, 2010; Pepermans & Maeseele, 2014; Swyngedouw, 2007, 2010a, 2013; Zizek, 2007). That which is of the essence of 'the political', such as conflicts or power relations, is often misrecognized in discourses on ecological modernization, the green economy or sustainable consumption, precisely because they represent environmental questions in technocratic, consensual, or individualized terms (Kenis & Lievens, 2015). The result is that social and political antagonisms, contradictory interests and power are rendered invisible and therefore uncontestable. This is not only a problem from the point of view of democracy, which requires one acknowledges conflict and power (Lefort, 1988; Mouffe, 2006). It can also hamper the effectiveness of environmental transformations as it makes us blind to structural and political obstacles and challenges (Kenis & Lievens, 2014).

The role of science is a key topic in the debate on post-politics in the context of climate change (Goeminne, 2010, 2012; Machin, 2013; Maeseele, 2015; Pepermans, 2015; Swyngedouw, 2010b, 2011). Goeminne (2010, p. 208) stresses for example the 'perfidious role played by science in environmental issues'. The latter are not only 'predominantly staged scientifically', science is also usually portrayed as being concerned with mere 'matters of fact', and therefore as the ground for the provision of effective solutions.

Much less scholarship exists, however, on how to repoliticize the climate debate, i.e. represent it in such a way that power, exclusions, oppositions of interests and underlying values and visions of society become visible and contestable. A number of scholars have argued we need to reconsider the relationship between science and politics in this context and to uncover that scientific practice is always based on politically significant forms of social construction (Demeritt, 2001, 2006; Latour, 2004a; Wynne, 2010). For example, David Demerrit argues that scientific practices inevitably rely on 'tacit social and epistemic commitments', stating not only that science is used in ways that are not neutral from a social and political point of view, but also that there is an 'irreducibly social dimension of scientific knowledge and practice' as such, as a result of which 'a politics' is built into 'the technical practices of science itself' (Demeritt, 2001, pp. 307, 308, 309).

Similarly, according to Goeminne, scientific research can never be politically neutral, because 'matters of fact' are always also 'matters of concern' which are constructed or composed in a specific way, and this composition inevitably generates certain exclusions (Goeminne, 2012). Combining a Mouffean analysis of the political with insights from social constructivist approaches to scientific practices, Goeminne argues that the socially constructed and therefore political nature of scientific facts should be acknowledged, and that this can help overcome the depoliticization of the climate debate.

Social constructivism is confronted with an important challenge, however, namely climate denialism, which at first sight appears to have instrumentalized the disclosure of the moment of social and political construction in climate science in order to refute the latter. This is evidently not a line of thought which social constructivists such as Demerrit would agree with. On the contrary, he calls for 'a more reflexive understanding of science as a situated and ongoing social practice' (Demeritt, 2001, p. 309). In other words, we need to acknowledge that all science is based on social practices of

construction, which are not a basis for refuting science, but which should lead to more reflexivity on the part of the scientific community.

Being highly critical of climate denialism, Goeminne understands the latter precisely against the backdrop of the depoliticization of the climate debate: 'climate denial constitutes […] a symptomatic outburst of the political in a completely depoliticized landscape' (Goeminne, 2012, p. 7). To ground this statement, he refers to the work of political philosophers, in particular Chantal Mouffe, who developed a sophisticated analysis of the political and depolitization (Mouffe, 1993, 2006, 2013). For Mouffe, depoliticization occurs when one fails to acknowledge the constructed (and therefore contingent) nature of the social and the fact that each such construction entails certain exclusions and can therefore generate conflicts or antagonisms. Her key argument, which she draws from Carl Schmitt (1996), is that by pursuing consensus and misrecognizing or concealing conflict, the latter often tends to become more intense and even unmanageable. Conflicts can only be kept within certain bounds by making them visible, and by pursuing reciprocal recognition amongst adversaries, so she argues. Applying this framework to the climate debate, Amanda Machin suggests that 'the focus upon consensus about climate change (…) actually encourages the growth of passionate climate change denial' (Machin, 2013, p. 96). According to her, the intensity of climate denialists' opposition to mainstream opinions follows from the scientific and technical way climate change has been framed, which leaves 'only two alternatives: agree or reject' (Machin, 2013, p. 97). Building upon that argument, Maeseele states that '(a) discursive construction of climate change in terms of an exclusionary scientific consensus (…) impedes democratic citizenship, since it encourages either political apathy by alienating people from owning the issue or polarization between acceptance and denial' (Maeseele, 2015, p. 393).

The empirical evidence underpinning the observation that climate denialists somehow bring back a 'political' dimension into the debate at first instance seems overwhelming. Is it not the case that climate denialism has sparked a tremendous conflict and debate in society, radically pitting groups of scientists, politicians and civil society organizations against each other? Well-known climate denialists such as Bjørn Lomborg have variously questioned that climate change is a reality, that it is as serious as is often thought, and that it is possible to avoid it through certain policy measures, thus sparking heroic debates (Lomborg, 2001, 2007). Nevertheless, the question should be asked whether it is correct and useful to understand climate denialism as a 'return of the political' into the field of climate change (Goeminne, 2012).

In order to answer this question, we have to address the way in which constructivists use the term 'political', and the way they attempt to fold post-foundational political theory into their study of scientific practice. In this paper, we will in particular focus on the seminal work of Gert Goeminne, who over the last few years has most consistently attempted to integrate a Mouffean account of the political into science and technology studies. While sympathizing with his project, this paper develops three objections to it. First, we will argue that Goeminne underestimates the moment of symbolization in Mouffe's theory of the political, and too easily leaps from the observation of exclusions in processes of social construction to the presence of political antagonism. Second, we show that as a result, the term 'political' is inflated and loses its specific meaning. Third, we argue that on this basis, the meaning of climate denialism cannot be adequately grasped as a 'return of the political' (Goeminne, 2012). In the next section, the first two arguments will be addressed in detail. Thereafter, we will develop our own account of the symbolic institution of science, inspired by Claude Lefort's variant of post-foundational political theory, which has many affinities with Mouffe's. This account is fully compatible with the constructivist project, even though it leads to a more critical view on the description of science

in 'political' terms. As we will argue, like all social fields, the field of science (understood in this context as the study of phenomena like climate change) is symbolized or represented in particular ways, and scientists inevitably give meaning to their activity in terms of these symbolizations. Our argument is that the specific system of meanings governing the scientific field makes the latter's politicization (understood here as the self-description of this field in political terms) particularly difficult, not to say impossible. Finally, we will bring this analysis to bear on the debate on climate denialism, showing that it cannot be analyzed in terms of a 'return of the political'. Overall, the aim of this paper is to develop a more nuanced understanding of the aporetic nature of the relation between science and the political, from *within* a broadly conceived constructivist framework.

Reading Politics into Science

What does it mean to state that science is political? While it is common to use the term 'political' in a post-positivist description of the inevitably situated and perspectival nature of scientific practices, only recently scholars have started to systematically integrate post-foundational theories of the political into this approach. The work of Goeminne is a case in point. Drawing on Latour's distinction between matters of fact and matters of concern (2004b), Goeminne underlines how scientific facts always express 'a particular way of being concerned with the world' (2013, p. 97). These concerns inform the way in which scientists 'compose' or frame 'different pieces together into a meaningful whole' (p. 98). He refers to climate modelling as an example of such 'concernful work of composition'. Key to actually existing approaches to climate modelling is that social relations that are the root causes of greenhouse gas emissions are excluded from the models, as the focus is exclusively on the physical properties of these gases. This shows that 'the scientific composition of global climate change' inevitably takes certain things into account and others not (p. 98).

This disclosure of in- and exclusions, generated by scientists' work of composition, provides Goeminne with the conceptual bridge to post-foundational political theory, and more in particular, Chantal Mouffe's influential account of the concept of the political, in which the concept of exclusion similarly plays a pivotal role. 'In stating that science is political', he argues, 'I merely claim that it differentiates between the internalities and externalities of its composition' (Goeminne, 2013, p. 103). The question is whether this conceptual bridge is substantial enough to allow for the integration of Mouffe's concept of the political into constructivist analyses of science, and thus for redescribing science in political terms.

In *The Concept of the Political*, Mouffe argues that 'every identity is relational and that the affirmation of a difference is a precondition for the existence of any identity' (Mouffe, 2006, p. 15). Goeminne concludes that 'every identity is constituted in and through its necessarily antagonistic relations with diverse others' (Goeminne, 2013, p. 103). As the concept of antagonism is the key to Mouffe's understanding of the political, the evident conclusion is that the play of in- and exclusions provides the basis for calling science 'political'. But this is a non sequitur. What Goeminne fails to appreciate, is that the relational character of identity does not *ipso facto* entail that each identity is produced *antagonistically*. Indeed, Mouffe explicitly states that the relational character of identity does not mean that 'such a relation is necessarily (…) an antagonistic one' (Mouffe, 2006, p. 15). This is only a possibility.

To grasp what is exactly at stake, it is important to underline that there is a significant shift in Mouffe's (and Laclau's) work on this issue. In their early co-written book *Hegemony and Socialist Strategy*, Laclau and Mouffe analyse how identity and objectivity are always discursively constituted

through radical exclusion. Precisely because of this, however, a discourse can never arrive at full closure. Closure presupposes exclusion but this at the same time renders full closure impossible: a discourse continues to be haunted and destabilized by what it excludes. Laclau and Mouffe called the experience of this 'limit' 'antagonism' (Laclau & Mouffe, 2001, p. 122). To summarize the argument very bluntly: identity or objectivity are always discursively produced, discourse always generates exclusions and these exclusions manifest themselves as antagonisms, which Mouffe would later describe as a key dimension of the political. This line of thought underpins Goeminne's project to expand this 'non-essentialist, antagonistic thesis from the social to the natural sphere, arguing that the construction of order more generally (identity, knowledge, etc.) is relational, its condition of existence being the affirmation of an exclusion' (Goeminne, 2013, p. 104). In other words, there is antagonism, and therefore politics, involved in the way scientists 'compose' their object, such as climate change.

The Symbolic Institution of the Scientific Field

A key contribution of social constructivists is to have put the division between scientific knowledge (e.g. on climate change) and politics into question, in an attempt to show that not only the application of science is political, but that scientific practice is always already political. From this perspective, they criticize the political (or depoliticizing) effects of views that demarcate science and politics and assume science to be neutral. Demerrit deplores for example that 'global climate change has been constructed in narrowly technical and reductionist scientific terms' (Demeritt, 2001, p. 312). A key role is played by the IPCC in this regard, as it has 'tried as much as possible to divorce the scientific study of this problem from the social and political contexts of both its material production and its cognitive understanding' (p. 312). As he states: the 'analytical division of labour between science and politics serves some obvious political functions' (p. 313). The proclaimed neutrality of science makes it easier for it to be instrumentalized by policy-makers. Moreover, the focus of scientists on CO_2 as such makes us blind to socially and politically different forms of CO_2 emissions (Swyngedouw, 2007) (as if CO_2 emissions from luxury consumption equal those of survival consumption), which can be politically interesting for certain groups of policy-makers (Kenis & Lievens, 2015).

Following Gieryn, Demerrit argues that 'boundary making is one of the most important ways in which science is socially constructed' (Demeritt, 2001, p. 321; Gieryn, 1995). Questioning these boundaries, a key aim of the constructivist approach is to reveal forms of continuity between science on the one hand, and society and politics on the other, or to show that the boundaries between science and politics are porous. However, relativizing these boundaries is one thing, redescribing science in political terms, as Goeminne tries to do, quite another. In order to understand what is at stake, it is important to investigate the specific representational dynamics underpinning this process of 'boundary making'. In this way, we want to nuance Goeminne's thesis that science is political because it can 'be regarded as a scene of struggle' about what needs to be in- and excluded (Goeminne, 2013, p. 105).

The point we want to make is that the very way the scientific field is symbolically instituted makes it impossible to redescribe or resymbolize it in political terms such as struggle and antagonism. On this basis, we will argue that the relation between science and the political is characterized by a double bind: the construction of scientific matters of concern appears to necessarily lead to a political understanding of science, whereas the representational order through which the scientific field is constituted makes this impossible. Importantly, we will develop this argument while remaining on

constructivist grounds, namely by investigating the social process of representation constitutive of the scientific field.

In this attempt, we draw inspiration from Claude Lefort, another representative of post-foundational political theory, with whom Chantal Mouffe has many affinities, but who stresses even more strongly the central role of representation or symbolization (Flynn, 2005; Lefort, 1986, 1988). Lefort argues that there is no society without an interpretation of itself: an image in terms of which citizens interpret society, social relations and their place within them. He calls the order of representations or symbolizations in terms of which society is given meaning the 'symbolic order' of society, or 'the political'. In a democratic society, the sphere of 'politics' (the parliament, government and the whole arena of political debate and struggle) provides the context where this image of society is enacted and becomes visible. For example, the configuration of the parliament in terms of the opposition between majority and opposition provides society with a specific image of itself, namely as divided. Moreover, it shows that this division should not be a problem, but that it is legitimate, and that there are adequate spaces and fair ways to deal with it. Society is thus 'instituted' (given meaning) and delineated through a set of representations, which, crucially, always take place in the name of something, or refer to a specific (symbolic) 'place'. As Lefort argues, the fact that society 'is organized as *one* despite (or because of) its multiple divisions (…) implies a reference to a place from which it can be seen, read and named' (Lefort, 1988, p. 225). This is a (symbolic) place of power. Society can be instituted, for example, in the name of the people, the nation, or the ideas of liberty and equality. This symbolic pole, Lefort argues, 'manifests society's self-externality'. This externality is not 'real', but symbolic: a society defines itself by referring to something which is (symbolically) outside itself, a place from which society is given meaning.

The symbolic order in pre-democratic societies is radically different from that in democratic societies. Primitive societies, for example, are often instituted from the place of the ancestors, a place which is (again, symbolically) transcendent to the social order. This place is still a place of power, but it does not have a political character or is not recognizable as political. To the extent that there is a kind of secular administration, it 'is only an intra-worldly mandatory of a transcendent sacred order' (Braeckman, 2014, p. 5). From our modern vantage point, we can unmask the activities of priests, druids or magicians as the exercise of power, and therefore as somehow political, but the people living in such a society cannot do this, as they think their society as instituted from the transcendent place of the ancestors or the gods, whereby the priests do not make political decisions but merely incarnate the order that has already been fixed.

A democratic society, in contrast, situates this place of power within itself. The nation or the people for example, are principles or ideas which transcend all actually existing social groups, but are nevertheless immanent to society. A kind of 'immanent transcendence' is therefore at play (Singer, 2013, p. 194).This 'immanentization' is of key importance for democracy: if society has its foundation within itself, and if this is rendered visible in the sphere of politics, it can think of this foundation as alterable, in contrast to a situation where the place from which society is instituted is wholly transcendent. Therefore, the representations through which a democratic society is given meaning can be contested and politicized.

In a democratic society, Lefort (1988) argues moreover, knowledge became symbolically separated from power and the Law, implying that those who have power cannot claim to incarnate knowledge: it is not because one holds power that one also holds the truth. Apart from this insight, Lefort never addresses issues that are directly relevant for the topic of this paper, namely the relation between science and the political. Yet, in our view, applying key ideas of Lefort to how the field of

science is instituted can yield interesting insights into the relation between science and the political. Indeed, the field of science similarly requires a specific set of representations, or a symbolic order in terms of which it is delineated, unified and given meaning. These representations are claims which are made 'in the name of' something. In other words, the field of science is instituted by referring to a place in terms of which it is given meaning. The question, therefore, becomes: in which name do scientists speak when they delineate their field of operation? What kind of transcendence is at stake? Following the above analysis, the answer to this question will be key to assessing the possibility for science to become a field of politicization and contestation.

Our contention is that the (symbolic) place from which the field of (e.g. climate) science is instituted is that of what Roy Bhaskar calls an intransitive object. Bhaskar describes this object as 'the real structure or mechanism that exists and acts quite independently of men and the conditions which allow men access to it' (Bhaskar, 2008, p. 6). Our aim is not to intervene in the discussion amongst philosophers of science concerning the question whether or not intransitive objects exist (Bhaskar, 2002). The point is that scientists actually give meaning to their activity through representations which (perhaps implicitly or imaginarily) point to the place of this intransitive objectivity – which is not the same as the 'composed' object of study or 'matter of concern'. In other words, what we want to stress is that scientists not only 'compose' scientific matters of concern, as Goeminne argues, but also develop representations through which they give meaning to their activities. What we focus on, is thus not how scientists 'represent nature', but how they give meaning to their own field of activity.

In a debate with Ernesto Laclau, Roy Bhaskar puts it bluntly (Laclau & Bhaskar, 2007, p. 14):'Did global warming exist prior to its discursive constitution?', he asks, suggesting that even though the scientific practices through which we develop knowledge on the climate rely on social constructions (transitive objects), scientific claims are made in the name of an intransitive object. If one would ask climate scientists whether 'global warming went on long before we had the concept of it', more than 99% would undoubtedly answer affirmatively. Scientists speak in the name of an object which is intransitive, i.e. which is not affected as such by its representation, or by being known. In other words, they speak in the name of an object that is considered transcendent to the socially constituted field of science itself, and in terms of which this field is instituted as such. Even if in their scientific practices, they 'compose' their matters of concern, without the symbolic reference to this object, the specific meaning of their activity would be lost. Once again, we can leave open the question whether this symbolic operation is warranted or not. What interests us, is that this self-understanding of scientists will have important consequences for how the field of science is given meaning, and for the extent to which this field allows for politicization (i.e., redescription in political terms).

Even though objects of knowledge, methods and models are socially constructed in politically significant ways, scientists cannot possibly accept that the (symbolic) place from which their activities draw their meaning is a social construction or a place *immanent* to society. Even though all constructions which scientists create in the process of knowledge production can be transitive (as Laclau stresses), the field of science is instituted, and acquires its meaning and identity, from a specific place, in whose name scientists speak, and which is that of an intransitive object. It needs to be underscored that this argument is not essentialist, suggesting there is an essence to science setting it apart from other fields in society. On the contrary, our argument remains within a broadly constructivist framework, focusing on the representations through which the field of science is actually given meaning.

The question whether the place from where a social field is instituted is immanent or transcendent has important implications for the dynamics of contestation. It is precisely because in a

democratic society, the place from where society is given meaning is an immanent transcendence (namely the people, which is not a 'real' collectivity, but a symbolic pole of identification) that politicians who claim to speak in the people's name can be contested through counter-claims or counter-representations. This will be a process which is openly recognized and given meaning as political, namely as a power struggle with contingent outcomes. The dynamics of contestation within the scientific field will be different. 'Contestation' (which is actually an inadequate, because too politicized term in this framework) will be conducted in the name of a fully transcendent object, which does not allow for an understanding of scientific oppositions in political terms (i.e. as a 'struggle', let alone a 'power struggle'). On both levels, a different understanding of foundation is at play. As Oliver Marchart has shown, theories of the political argue that a social order has no ultimate foundations, or that any foundation is only contingent, which is precisely what makes them contestable and politicizable (Marchart, 2007). However, the field of science will be thought of as having a strong foundation (whether this is ultimately reachable or knowable is, again, a different matter). In the end, science is grounded in 'an' objectivity – however a specific matter of concern is subsequently 'composed' through concrete research practices -, which remains what it is, whether it is adequately represented or not. A genuinely political representation of social relations or practices, in contrast, lacks such an ultimate foundation and also makes that visible (e.g. by openly allowing for contestation through channels ranging from elections to civil disobedience).

The result of this analysis is a double bind. Both the social constructivists who question the divide between science and politics and those who affirm this divide appear to be right to some extent. On the one hand, scientific practices can be shown to be based on social constructions with potential political ramifications. On the other hand, the disclosure of such a process of social construction cannot yield a political self-understanding of science, simply because the field of science cannot possibly become an arena of struggle that is *political*, which would require that this struggle is conducted in the name of immanent-transcendent principles. On the one hand, a political understanding of science appears to be necessary, given the evidence constructivists provide. On the other hand, it is impossible, precisely because of the way the scientific field is symbolically instituted.

The implication is that it is always possible to reveal or unmask scientists' social constructions and the exclusions thus generated, but that the answer of scientists can only be to become 'even more scientific'. It is possible and necessary to unmask the porous boundary between science and politics, but the reaction of scientists will be to symbolically reaffirm this boundary and the transcendent place from which their field acquires its meaning. Each time natural science is challenged as being political or ideological, this urges scientists to reaffirm the boundary even more strongly and guard it more closely. The nature of the symbolic institution of science makes it impossible for scientists to think that the place from which their activity is given meaning is immanent.

To sum up, the symbolic reference to a dimension of intransitivity constitutes the condition of possibility of the very meaningfulness of scientific discourse. Without it, the whole (natural) scientific project would fall apart.[1] The symbolic place of this object – whether one considers it as fictitious or not – functions in such a way as to immunize science from genuine politicization (i.e.. resymbolization in political terms such as power struggles and antagonisms). As a result, one cannot represent a natural scientific practice as both 'scientific' and as 'political' at the same time. In this sense, natural science fundamentally differs from art: a piece of art can overtly represent itself as political, and yet remain a genuine piece of art. In science, that combination is not possible: the self-representation of science is at odds with what a genuinely political or politicized self-representation would entail.

Science and Society

An entirely different matter, however, is when climate scientists take part in public or policy debates. At that moment, boundaries do get blurred, as scientists can no longer claim to speak *merely* in the name of a 'matter of fact', but start to speak in the name of a 'matter of concern', to use Goeminne's (and Latour's)terminology (2010, p. 212).[2] Putting scientists' public discourse into question, however, does not amount to a politicization of science, but to a politicization of the place of science in society, which is not the same thing. It is evidently possible to politicize science's relation to society (for example, the way science is embedded in particular scientific institutions, relies on flows of funding, etcetera). It is to this relation that we are turning now, to make two arguments. First, we will argue that unmasking power and exclusion in scientific practices or in the social constructions developed by climate scientists is not a necessary condition for criticizing and overcoming depoliticization in the climate debate. Second, we will argue that climate denialism does not lead to a return of the political in the field of science, nor of the climate debate as such, but relies on a number of deeply depoliticizing discursive operations.

Let us first address the problem how to address post-politics in the climate debate. The key problem, in our view, resides not with climate science as such, but with how it is translated and feeds into the debates about the root causes of climate change, and about strategies and alternatives. Importantly, these latter debates do not require one adopts a standpoint that is transcendent to society. Three points are relevant in this context. First, the translation from science to policy is a translation between two social fields which are symbolically instituted in radically different ways, and whose self-understanding therefore also radically differs. Second, it is important to heed the symbolic separation of power, law and knowledge, which is key to democracy, as we stated above. Those who hold power cannot claim to incarnate knowledge, and the development of knowledge ought to remain autonomous from political power. Contrary to a theocratic regime, the holder of political power in a democratic society is not *ipso facto* the holder of the truth. Third, it is impossible to directly deduce strategic political precepts from a scientific analysis of the state of the planet. The real problem of depoliticization is located here: in the idea that there is a one-to-one, non-contingent relation between natural scientific insights on the state of the climate and the policies and strategies needed to tackle it (Maeseele, 2015, p. 393; Swyngedouw, 2009, p. 602).

The problem with the mainstream or hegemonic climate discourse (as presented by a large majority of government and policy bodies, corporations and big NGOs) is that it focuses primarily on the nature of the climate problem and its effects, heavily relying on the reports of the IPCC and other natural science studies. More specifically, the focus is on CO_2 and its effects, making abstraction from the socially embedded root causes (Demeritt, 2001; Swyngedouw, 2007, 2010a). To use Mouffe and Laclau's terminology, CO2 is the 'nodal point' around which the dominant discourse is woven (Laclau & Mouffe, 2001). In other words, in the dominant discourse, CO_2 comes to stand for the whole of the catastrophe we are facing: in order to ward it off, we have to reduce CO_2 emissions. A typical, post-political result of this is the slogan used by the British government: 'Act on CO_2' (Urry, 2011, p. 90). The result is a strange kind of politicization which actually is not one: there is talk about conflict and struggle, but one that focuses on an externalized and socially disembodied enemy: CO_2, against which we are all united (Swyngedouw, 2007, 2010a).

At the same time, the analysis of human-societal root causes, strategies and alternatives is almost absent from the mainstream discourse, and to the extent such an analysis is made, it often remains rather superficial. In so far as future images are presented in the mainstream discourse, the choice

seems to be between retrofitting the current situation and a completely apocalyptic catastrophe (Swyngedouw, 2010a; Swyngedouw & Kaika, 2014). Clearly, this kind of choice tends to paralyze the debate.

In this context, policy measures are often presented as if they are directly derivable from natural scientific analyses. If the IPCC, for example, puts forward technologies such as nuclear energy to bring about a reduction in fossil fuel consumption, as it did in its 2007 report, it goes beyond its core task (namely providing information on the state of the climate and the effects of further global warming), making a leap from science to strategy, without fully recognizing the politically sensitive nature of the domain it is thus entering (IPCC, 2007). Upholding a claim to scientificity in the domain of strategy has important symbolic effects. A failure to fully acknowledge this can lead to forms of technocracy that are fundamentally post-political. The actual question, therefore, is how to create a terrain for political plurality to appear within the debate on strategies, root causes and alternatives, and to make sure the symbolic self-understanding of natural science does not impede forms of politicization on these terrains.

Climate Denialism as Depoliticization

Interestingly, a somewhat similar analysis can be made concerning climate denialism. At first sight, it might indeed appear as if climate denialists repoliticize the climate debate. Jean-Marie Dedecker, a well-known Belgian politician, climate denialist and a radical opponent of government intervention and regulation, calls environmentalism 'a new powerful religion' and forcefully attacks the apocalyptic imaginaries that are present in many climate discourses, because they stifle voices of dissent (Dedecker, 2010). Although his political outlook is radically different from Slavoj Žižek's, Dedecker's argument strikes a chord with Žižek's critique of post-political forms of environmentalism, which use fear in order to mobilize and unify the mass of the people and to make them submit to forms of technocratic and depoliticized governance (Zizek, 2007). But does this also mean that the typical climate denialists' discourse amounts to a genuine return of the political within the climate debate?

The discursive strategies many climate denialists adopt are actually based on a number of typical depoliticizing operations. A first move is to focus on the field of natural science itself. At first sight, it looks as if climate denialists (re)introduce a political conflict as they state there is no agreement with regard to the issue of climate change on the scientific terrain. But what they actually do, is to reproduce the sophisticated ideological move that is typical of many forms of depoliticization. They often combat specific climate policies, such as government regulation (Oreskes & Conway, 2010), but insinuate that their combat is grounded in natural science. In so doing, they immunize their political positions, at least to a certain extent, from contestation and critique. Indeed, whether they claim that mainstream climate science is utterly wrong or that it is biased as a result of practices of social construction, they cannot but claim to speak in the name of a more adequate 'scientific truth'. Climate denialists thus shift the debate from the plane of politics and policy proper, to that of natural science. In this context, they exploit the truism that science never gives 100% certainty in order to support their claim that the scientific debate is far from over, and to legitimate their own position (Oreskes & Conway, 2010). In doing so, however, they ward off a genuinely political debate.

Furthermore, as they attack climate science because it would lead to government intervention and regulation (Oreskes & Conway, 2010), they also suggest the latter would follow in a logical and unilinear way from the former. More than anyone else, therefore, they tend to depoliticize the relation between natural science and politics. Indeed, instead of directly engaging in a political or ideological debate concerning for example the desirability of more government regulation, climate denialists

present their own claims as grounded in what they consider as science, and thereby conceal what is politically really at stake for them (Jacques, 2008, p. 28; Oreskes & Conway, 2010). Therefore, while denouncing mainstream climate scientists for only engaging in ideology and defending political positions, this is paradoxically what they are doing themselves: in the best case, they use or even instrumentalize 'science' (or what they consider to be so) to defend their policy preferences. Even if there would be authentic climate denialists who do not instrumentalize science in order to defend certain political projects or policy preferences, but who would merely posit a disagreement within the field of natural science itself, it is still difficult, and even impossible, to claim that the result is a return of the political within science as such.

What climate denialists most often do, is not to disclose the social constructions of climate science, but rather to exploit inevitable uncertainties, gaps or open questions in the science in order to reinforce their own ideological positions. Climate denialists thus commit a crucial fallacy: they do as if political positions (such as advocating more state intervention in the economy) are deducible from natural scientific insights, and therefore, require alternative natural scientific foundations for their own political preferences. Seeking ultimate foundations is precisely what depoliticization is about (Marchart, 2007).

Conclusion

'While the climate skeptics have sought to refute climate change science by exposing the socially negotiated assumptions and uncertainties of the climate models, advocates of GHG reduction have responded by denying them altogether', Demerrit argues (2001, p. 329). However, redescribing science in political terms provides little help in dealing with this situation. Rather, taking the self-representation of science seriously, the reflexivity Demerrit calls for can only lead to an acknowledgement of 'socially negotiated assumptions and uncertainties' *in view of* their scientific correction, and ultimately, neutralization (whether that is possible in principle or not is, again, not an issue here). Reflexivity will not open the field of science to 'struggle', but will lead to a more closely guarded drawing of boundaries, rather than opening them up, precisely because of the way the field of science is symbolically given meaning. To repeat, this will both be a necessity and ultimately an impossibility, as a result of which the drawing of boundaries between science and politics can never be finalized, but remains an ongoing process.

This drawing of boundaries is surely a politically significant process, as it is about distinguishing what is to be understood in political terms and what is not. As Carl Schmitt, who was the first to have coined the distinction between 'politics' and 'the political', once stated, 'any decision about whether something is unpolitical is always a political decision' (Schmitt, 1988, p. 2). This means that there is something politically at stake in a decision to keep a certain terrain depoliticized. For example, Schmitt famously advocated the depoliticization of the economy, against the Marxist doctrine of the class struggle (Cristi, 1998; Schmitt, 1998). In a similar way, there is something political at stake when primitive societies locate the place from which they are instituted in a transcendental, supranatural realm. Or there is something politically relevant at stake when scientists give meaning to their activity from the vantage point of a transcendent, intransitive object. The political significance resides precisely in that it symbolically wards off politicization, both understood as external political interference and as a resymbolization or resignification of science in explicitly political terms (in terms of power, conflict, etcetera).

The boundaries can of course be drawn and redrawn in various ways, and each of these will yield a different potential for politicization. In this sense, we do not take issue with scholars who discursively construct climate change in integrated social-ecological terms, and speak about socioecological assemblages (Swyngedouw & Heynen, 2003, p. 912), socio-natural entanglements, or social ecological configurations (Heynen, Kaika, & Swyngedouw, 2006, pp. 7, 2), stressing, for example, the social root causes of CO_2 emissions and their socially differentiated effects. This mode of representation makes a politicization of the climate debate possible precisely because it situates the 'place' from which the debate is given meaning immanently (within society). This is possible and meaningful if we have a debate on the questions of root causes of ecological destruction, strategies and alternatives. Such a way of framing the discussion rightly challenges climate scientists to critically reflect on how they present their findings to a wider audience of scholars, policy-makers and citizens. Whether all greenhouse gases are portrayed equivalently, for example, or according to their social sources and effects, makes a significant difference for the dynamic of the political debate. In such a context, discourse *has* an effect on its object (albeit in very complex ways), which can be argued to be transitive *as* a *social*-ecological object. But such a mode of representation does not amount to a return of the political in the study of greenhouse gas concentrations in the atmosphere *per se*.

To sum up, it is crucial to acknowledge the different ways in which different social fields are symbolically instituted. To the extent that we fail to understand the symbolic significance of the distinction between climate science and the sphere of politics proper, this can even amount to a depoliticization and de-democratization of society. It is a symptom of the fact that we fail to fully distinguish power, law and knowledge, which is a key presupposition of democracy. This led us to a slightly different interpretation of the relation between climate denialism and 'the political' than that of scholars such as Goeminne. To summarize, our point is threefold. First, climate denialists are not attempting to repoliticize climate science, but in fact (and inevitably, we would argue) reproduce, and even strengthen neutralizing and depoliticizing representations of science. Second, they often do this in order to reinforce their stances in the actual field of policy. They thus operate with the idea that policy proposals unambiguously follow from 'correct' natural science, which results in a depoliticization of the discussion on policy itself, which is deeply problematic. Finally, this post-political nature of climate denialism provides us with an illustration of the double bind that is characteristic of the relation between natural science and the political. If climate denialists have one merit, it is that they have forced us to re-think what it means to conduct (natural) science, and how science relates to the political, amongst other things. Without any doubt, we are increasingly becoming aware of the tremendous complexity of this fascinating question.

Notes

1. In the framework of this article, we cannot engage with the specificity of the social sciences. But it is evident that this analysis cannot straightforwardly be applied to the social sciences, where the possibility for a political-self-understanding of scientists is much greater, maybe even inevitable.

2. The fact that 'matters of fact' are actually always already 'matters of concern', as Goeminne shows, is not relevant for understanding the symbolic institution of the field of science: what counts is how scientists understand themselves and their activity, not how social constructivists describe their activities.

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